## Frankston City Council Invasive Species Guide



Lifestyle Capital of Victoria



## **Acknowledgements**

We would like to acknowledge that we are situated on the traditional lands of the Boon Wurrung and Bunurong people, this special place now known by its European name, Frankston.

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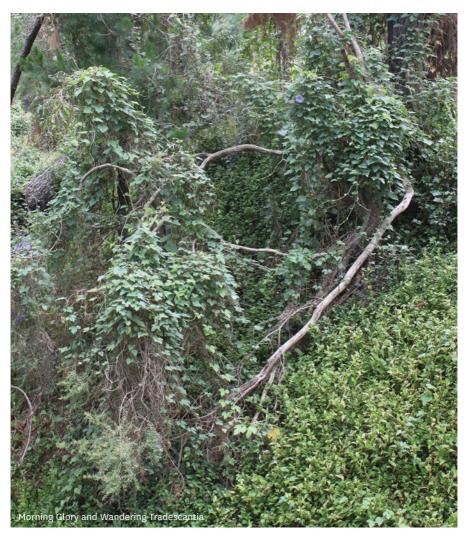
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## Introduction

## What are invasive species?

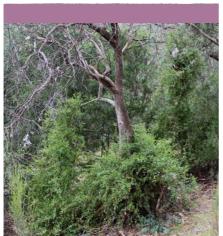
When a plant or animal invades and thrives in an area where they do not naturally occur, they are known as an invasive species.



Australia is famed for its unique and diverse plants and animals, with 80% found nowhere else in the world. However, the destruction and fragmentation of habitat and the impact of invasive plants and animals has had a substantial impact on our rich biodiversity. Australia now has the fastest rate of mammal extinction in the world and is number 10 for overall species extinctions.<sup>1</sup>

Invasive plants can also be referred to as weeds, garden escapees or pest plants. They are a problem because they out-compete local plants for light, water and nutrients. In a short period of time they can replace local plants effectively removing the food source and habitat of the local fauna.

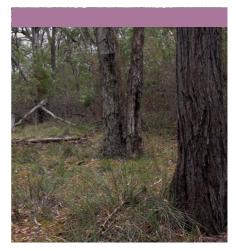
Invasive plants can include 'native' plants that refers to any plant found in Australia. Just like plants introduced from another country, native plants



have the potential to become an invasive plant when grown outside their natural area. For example, the Bluebell Creeper (*Billardiera heterophylla*) from Western Australia was sold as a popular 'native plant' that is now aggressively invading bushland around Victoria.

Local plants can also be considered invasive when they proliferate and spread outside their normal habitat. For example, Coastal Wattle (Acacia longifolia spp. sophorae) and Coastal Tea-tree (Leptospermum laevigatum) are considered invasive in Frankston beyond the coastal region.

Invasive species threaten our unique natural environment.





Invasive animals can also be referred to as feral or pest animals. They prey upon indigenous fauna, compete with indigenous animals for resources such as food and shelter and graze on indigenous plant species.

It is estimated that feral cats, for example, have had a significant role in the extinctions of Australian native birds and small mammals, with about 80 endangered and threatened species currently directly at risk from feral cat predation.<sup>3</sup>

This guide has been developed to identify some of the most common invasive plants and animals in the municipality and to provide control methods that will help in eradicating the significant threat of invasive species to our unique biodiversity.

- <sup>1</sup> International Union for Conservation of Nature (2013).
- <sup>2</sup> World Wildlife Fund 'Jumping the Garden Fence Report' (2005).
- <sup>3</sup> Australian Environment Protection and Biodiversity Conservation Act (1999).

Once you have identified an invasive species on your property you need to know what control techniques to apply and when.

# Methods of Dispersal

Many current invasive species were originally introduced to Australia, either accidently or intentionally for horticulture, agriculture, forestry or the pet trade. They are successful because of their adaptability to disperse widely and reproduce rapidly and in large numbers. Some of the most significant factors include the:

- Continued selling of invasive plants and animals
- Dumping of garden cuttings and pets in bushland and waterways
- Outdoor disposal of livestock feed containing viable seeds or plant material
- Weed/seed contamination of nursery stock
- Dispersal by animals, birds and insects by consumption or attachment

- Movement of contaminated soil and quarry products
- Dispersal by wind or water
- Disturbance of soil and vegetation
- Movement of machinery and vehicles
- Attachment to clothing and footwear
- Occurrence of fire and drought which will impact on species.



## Weed responsibility

All land managers are responsible for managing weeds on their land, irrespective of whether the land is public or privately owned. There are two main classes of weeds:

## 1. Noxious Weeds

A Under the Catchment and Land Protection Act 1994 (CaLP Act) certain plants are declared as Noxious Weeds in Victoria. These plants cause environmental and economic harm or have the potential to cause such harm. The CaLP Act defines four categories of Declared Noxious Weeds:

- · State Prohibited Weeds
- Regionally Prohibited Weeds
- · Regionally Controlled Weeds
- Restricted Weeds

The Victorian Government is responsible for eradicating State Prohibited Weeds. If you think you have seen a State Prohibited Weed, telephone Agriculture Victoria on 136 186. Please do not attempt to control or dispose of these weeds yourself. Fines can apply if these weeds are not controlled on your property.

For information on State Prohibited, Regionally Prohibited and Regionally Controlled Weeds in the Port Phillip and Westernport catchment visit: agriculture.vic.gov.au and search 'declared noxious weeds'.

All land managers are responsible for taking all reasonable steps on their land to:

- eradicate Regionally Prohibited Weeds and
- prevent the growth and spread of Regionally Controlled Weeds.

## 2. Environmental Weeds

These are plants that threaten native vegetation. Landholders should make every effort to control these weeds on their land and to prevent their spread to other areas. There are requirements under Frankston City Council Local Law 2016 no. 8 for the control of environmental weeds.

As land manager, it is important to be able to identify and control all weeds posing a threat to your land or neighbouring land. Weeds don't observe property boundaries, so coordinating weed management with your neighbours or participating in a Landcare Group will increase your chance of success, while spreading the benefits beyond your property.

## Safety

Invasive plants can present very effective defence features such as spines, thorns, toxins and allergens that produce rashes and respiratory reactions. It is important to wear gloves, long sleeved shirt and long plants, boots and safety goggles.

## **Control of invasive plants**

Removing weeds by hand can involve sharp secateurs, shears, knives, pruning saw, mattock, spade, whipper snipper, mower, chain saw, crowbar, all potential accidents waiting to happen if you become tired and dehydrated. Take care to rest, use sun protection and drink plenty of water as weed control can be tough (but rewarding!) work.

**Chemical control** using herbicides should only be used when non-chemical control is unsuitable, such as when dealing with large infestations.

In many cases, weeds are only susceptible to one specific herbicide, and it is important to use the correct product and application rate for control of that particular plant. In most cases, plants must be actively growing to be vulnerable to herbicide treatments.

There are 5 types of herbicides:

- **broad spectrum** these work on a wide variety of weeds
- selective these work on a narrow range of weeds

- contact these destroy plant tissue at or near the point of contact (they do not spread around the plant), and require even coverage in their application
- **systemic** these move through the plant's circulation system, and can be injected into the plant
- residual these can be applied to the soil and destroy by root uptake.
   They remain active in the ground for a certain length of time, and can control germinating seedlings.

## When using herbicides:

- Do not spray in high temperatures or if rain is forecast within 24 hours
- Always read the label on the product and following directions for appropriate rates, safety procedures, handling and storage
- Some chemicals require a Chemical Users Permit.

Poisons Information Service 13 11 26

## Control methods

Once you have identified an invasive species on your property you need to know what control techniques to apply and when. An integrated approach using different control techniques at different stages of a species lifecycle is most effective. For example, to control Sweet Pittosporum you need to hand pull seedlings, cut and paint juvenile plants and drill and fill adult plants. This guide will provide you with the appropriate control techniques and the timing of actions for each species listed in this guide.

## Invasive plant control methods

Hand pull: ensure that the whole plant, including the roots and bulbs, is removed. It is often easier and causes less disturbance after rain. A chisel or trowel is useful for some species. Effective for seedlings and small infestations of grasses.

**Solarisation:** cover the area with black plastic sheeting with buried edges for a 4-6 week period before removing the plastic. This allows the heat from the sun to kill off the plants underneath. Most effective in summer and for dense infestations of invasive grasses and herbaceous (non-woody) weeds.





Mulch: smother plants with a thick 10 cm layer of weed-free mulch to limit available light to plants. Take care when using organic mulch as it will increase nutrient levels, which can favour some weed species. Bush mulch is a good option. Suitable for invasive grasses and herbaceous weeds.

**Deadhead:** use secateurs or a brush cutter to remove the plant flower head before it sets seed. Bag and dispose of appropriately.

Mower with catcher: cut plants before seeding if possible, but otherwise use a catcher on the mower to collect seeds as well as remove nutrient-rich material that can smother indigenous plants underneath it. Dispose of mown material appropriately. Suitable for invasive grasses and herbaceous weeds.

**Spray:** use a spray bottle, pack or wick wipe to apply herbicide to the leaves of weeds to the point where the leaves are wet but not dripping. Take care that the herbicide does not drift onto noninvasive species. Appropriate for young woody weeds, grasses and herbaceous weeds.









**Cut and paint:** cut the stem or trunk of the plant completely as close to the ground as possible. Immediately (within 20 seconds) paint the cut surface with a systemic herbicide. Appropriate for shrubs, some creepers and small trees.

**Scrape and paint:** similar to cut and paint but a knife is used to scrape away a section of the outside bark before the inner tissue is painted with systemic herbicide. Mainly used on vines and small shrubs.

**Drill and fill:** drill holes at an angle into the trunk of the plant to the moist wood below the surface bark. Create a ring of holes around 5-7cm apart as close to the base of the plant as possible. Immediately fill with systemic herbicide. Used especially on larger trees.







## Invasive animal control methods

Pest animal control also involves care with fencing material, poison baits and the sharp claws and talons of trapped animals. In some situations fencing can be an effective means of keeping invasive animals from entering your property. Trapping is also an option for feral cats and Indian Mynas, while baiting is generally used for rabbits and foxes.

Trapping and the use of baits requires permits to be obtained and humane methods to be adopted. Prevention can be very effective. Avoid leaving pet food outside, desex your pet cat and keep it indoors at night, ensure rubbsh bins are not accessible and do not dispose of unwanted fish in natural waterways.

# Get involved and learn

Many of Frankston City bushland reserves are supported by the local 'Friends groups.' These 'Friends' groups are community-based volunteers that meet at reserves to weed, plant and

help protect our natural areas. It's a great way to learn about indigenous plants and meet wonderful people in your local community. Visit:

frankston.vic.gov.au/EnviroFriends

## Frankston Indigenous Nursery

The place to buy healthy indigenous plants for your garden. A great range of plants available, as well as expert advice and guidance on indigenous plant selection and maintenance.



Opening hours (during autumn to spring):

Wednesday, 9am-3pm

And the first Saturday of each month, 9am-1pm or by appointment.

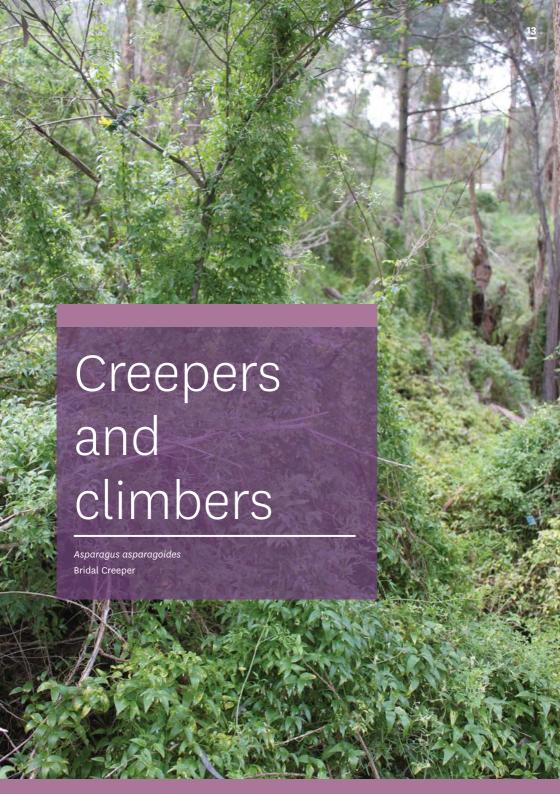
7 McMannis Way (Off McCulloch Avenue). Seaford (next to SES) **Tel:** 9768 1513 **Email:** fin@frankston.vic.gov.au

The nursery also has a volunteer program that contributes to the propagation and running of the nursery and new volunteers are always welcome. For further information contact the nursery.

# Invasive plants guide

The following section provides a description of garden plants with the potential to escape into our natural environment. If you have any of these plants growing in your garden please consider removing and disposing of them in accordance with the appropriate control method.







Acetosa sagittata
Rambling Dock

Growth is exceedingly rapid in this vine reaching 3-5m in one year after germination. As the plant grows it smoothers the supporting plant. The plant produces chains of underground tubers. Bright green, arrow-shaped leaves. Flowers mainly from February to April. Flowers change from green-cream in colour to red. Cream-coloured, paper-like fruit contains seeds.

## Dispersal

Thousands of winged seeds per plant are dispersed widely on the wind and in water. It is also spread in dumped garden waste and contaminated soil.

## Control

For small plants; dead-head to stop seed production and bag. Dig out tubers and roots. For larger infestations; scrape and paint in summer. Regular follow-up will be needed.

## Replacement plants

Climbing Lignum (Muehlenbeckia adpressa)

Bower Spinach (Tetragonia implexicoma)



Asparagus asparagoides
Bridal Creeper

This climbing plant competes above ground with a smothering web of stems and below ground with a thick mat of tubers. Wiry, green stems to 3m long with shiny, green leaves. Small, white flowers from August to September. Green, pea-sized fruit that gradually turns red in November.

## Dispersal

Seed spread by birds, rabbits, foxes, down watercourses, in dumped garden waste and contaminated soil and machinery. Will reshoot from underground roots and tubers. Can also be sold at markets and fetes.

## Control

For small plants; with minimum soil disturbance dig out small patches carefully removing whole tuberous root system. For large plants; where feasible solarise for up to 12 months. Otherwise spray with herbicide prior to flowering.

## Replacement plants

Common Apple-berry (Billardiera mutabillis)

Small-leaved Clematis (Clematis microphylla)



Asparagus scandens

## **Asparagus Fern**

This plant forms dense, tangled nets. The multi-branched stems grow to 2-4m. Leaves are narrow to 15mm. Small white to pinkish flowers from August to October. Round berries initially orange changing to red when ripe following flowering.

## Dispersal

Spread by birds and other animals feeding on the fruit, water, dumped garden waste, contaminated soil and machinery. The tuberous roots will readily re-shoot. Can also be sold at markets and fetes.

## Control

For small plants; carefully dig out ensuring the whole root mass is removed. For large infestations; spray with herbicide during winter and spring when the plant is actively growing but before seed set. Plants taller than 60cm should be cut back to a height of 30cm and then sprayed.

## Replacement plants

Knobby Club-sedge (Ficinia nodosa) Spiny-headed Mat-rush (Lomandra longifolia)



Billardiera heterophylla

## **Bluebell Creeper**

Evergreen, twining climber capable of smothering other plants. Attractive blue flowers spring to summer, followed by green then black berries. Each fruit contains around 50 small black seeds.

## **Dispersal**

Seeds spread by birds and foxes. Roots will reshoot if dumped or left in the soil. Seed germination promoted by soil disturbance.

## Control

For small plants; hand pull using minimum soil disturbance. The entire root system needs to be removed to prevent regrowth. For larger plants; either the cut and paint or scrape and paint. These methods are best applied in spring or early summer before the fruits develop. If the plant cannot be treated immediately, the severing of the vine will prevent seeding, however follow up work will be required.

## Replacement plants

Common Apple-berry (Billardiera scandens)

Small-leaved Clematis (Clematis microphylla)



Delairea odorata

## Cape Ivy

Vigorous perennial vine with succulent twining stems. Leaves are fleshy, lobed and hairless. Flowers are small, densely bunched, yellow, tubular, daisy-like and fragrant, occurring from autumn to spring. Produces many tiny seeds, each equipped with a small hairy parachute.

## Dispersal

Seeds sail on wind or water. Dumped waste will regrow from stem fragments.

## Control

Vines that have begun to climb can be cut at about 1 metre above the ground. The aerial stems can be left to dry out in the canopy. The bases left on the ground can be manually removed by hand, as they are generally shallow rooted. Ensure that all stem parts are removed as the plant can regrow from stem fragments. Follow up treatment should occur over the following 1-2 years.

## Replacement plants

Small-leaved Clematis (Clematis microphylla)

Purple Coral-pea (Hardenbergia violacea)



Dipogon lignosus

## **Dolichos Pea**

This vigorous, twining climber becomes woody at the base and grows to 3m. It forms a thick curtain that smoothers other plants including shrubs and small trees. Broad green leaves paler on the under-surface. Abundant clusters of pink and white pea flowers from September to January. Green seed pods to 5cm long ripening in spring - summer.

## Dispersal

Seeds, suckers and shoots from stem fragments. Seeds thrown by explosive pods. Seed spread in contaminated soil, dumped garden waste and water.

## Control

For small infestations; hand-pull or dig out young plants ideally before seeding. For large infestations; scrape and paint the stems of larger plants. Regular follow-up will be needed.

## Replacement plants

Love Creeper (Comesperma volubile)

Purple Coral-pea (Hardenbergia violacea)



Hedera helix English Ivv

This perennial evergreen grows to 30m and forms a thick, smothering carpet and trees may collapse under its weight. Glossy, leathery, green lobed-leaves. Inconspicuous green flowers from summer. Black berry-like fruit.

## Dispersal

Seeds and shoots from stem fragments. Spread by birds, foxes and dumped garden waste. Often sold at nurseries.

## Control

For vines climbing up shrubs or trees; cut each stem about 500mm above the ground. First scrape each stem and paint with herbicide above and below the planned cut. For vines growing on the ground; pull out by hand making sure all root and stem parts are removed. Where foliage is dense, spray with herbicide if no indigenous plants or water nearby. Apply heavy mulch over small ground infestations. Regular follow-up will be needed.

## Replacement plants

Climbing Lignum (Muehlenbeckia adpressa)

Small-leaved Clematis (Clematis microphylla)



Ipomoea indica
Morning Glory

This perennial climber can grow to 15m smothering everything in its path. Broad heart-shaped leaves. Clusters of funnel-shaped violet-blue flowers mainly from spring to autumn. Fruit is a brown capsule about 10mm in diameter. Poisonous.

## **Dispersal**

Spread from stems and stem fragments rooting. Mainly spread from dumped garden waste.

## Control

For small infestations; hand-weed wearing gloves as this plant can cause an allergic reaction. Gently pull up runners and treat nodes with herbicide, scrape and paint remaining roots and stems. For large infestations; spray dense thickets with herbicide.

Regular follow-up will be needed.

## Replacement plants

Love Creeper (Comesperma volubile

Purple Coral-pea (Hardenbergia violacea)



Lonicera japonica

## Japanese Honeysuckle

Grows on the ground and up trees to 10m. Bright-green leaves. White/cream flowers turning yellow mainly late summer to autumn. Strongly scented. Shiny black berries that are very poisonous.

## Dispersal

Seeds and shoots from rooting stems and stem fragments. Spread by water, birds, dumped garden waste and contaminated soil. Can also be sold at markets and fetes.

## Control

For vines climbing up shrubs or trees; scrap each stem as far as possible and paint with herbicide. Suspended vines can then be cut and left in place. Cut and paint large crowns and paint as many roots as possible. For vines growing on the ground; pull out by hand making sure all root and stem parts are removed. Where foliage is dense, spray with herbicide if no indigenous plants or water nearby. Regular follow-up will be needed.

## Replacement plants

Climbing Lignum (Muehlenbeckia adpressa)

Small-leaved Clematis (Clematis microphylla)



Senecio angulatus

## **Climbing Groundsel**

This perennial climber or large spreading shrub grows to 5-20m tall and can form thickets of 20m in diameter or more. Broad diamond-shaped leaves with lobed margins. Clusters of yellow, daisy-like flowers from May to July. Pale brown seeds with tufts of slender white hairs.

## Dispersal

Spread by seed and stem fragments. Dispersed by wind, in dumped garden waste and contaminated soil.

## Control

For young plants; hand-weed or dig out. Solarisation can also be effective. For larger plants; cut and paint the stems.

## Replacement plants

Common Flat-pea (Platylobium obtusangulum)

Bower Spinach (Tetragonia implexicoma)



Tradescantia fluminensis
Wandering Tradescantia

Forms dense mats to 60cm deep. Evergreen, shiny green leaves. Stems branching and trailing. White flowers from September to February. Stems and root fragments form new plants. Contact can cause skin irritations.

## Dispersal

Dumped garden waste is the most common method of dispersal.

## Control

Small infestations; can be removed by hand, but care needs to be taken to collect and bag all root and stem fragments. Wear gloves as this plant can cause an allergic reaction. If in a thick mat it is possible to roll the weed on itself like a carpet using a rake. For large infestations; it is more practical to spray during the active growing season. Spray the top layers of the weed and leave for 3-4 weeks. Return and spray the lower layers. You will need to repeat several times to kill all regrowth. Regular follow-up will be needed.

## Replacement plants

Nodding Saltbush (Einadia nutans)

Bower Spinach (Tetragonia implexicoma)



Vinca major
Blue Periwinkle

A perennial creeper that forms dense, smothering mats from an extensive root system. Leaves smooth, dark green, semi-glossy above and paler underneath. Single blue-mauve flowers fused at the base. Flowers from May to December. Able to spread rapidly in heavily shaded conditions.

## Dispersal

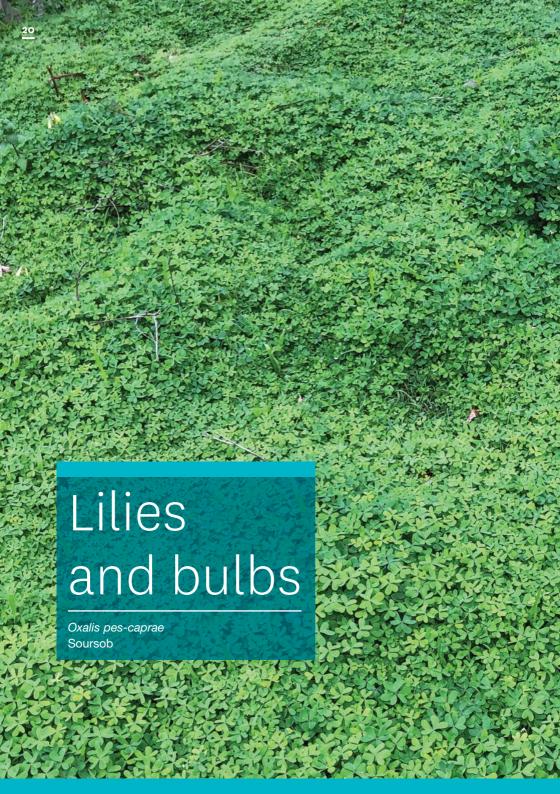
Stems root from nodes wherever they touch soil. Most commonly spread from dumped garden waste or contaminated soil. Can also be sold at markets and fetes.

## Control

For small infestations; remove by hand wearing protective clothing. This is best after rain when the soil is soft. Be sure to remove out all roots and stems and dispose of plant material carefully. For larger infestations; slash the plant in winter-early spring and then spray the regrowth.

## Replacement plants

Purple Coral-pea (Hardenbergia violacea) Bower Spinach (Tetragonia implexicoma)





Allium triquetrum

Angled Onion

Strappy leaves and white flowers on three-angled stem. Flowers emerge from bulbs to flower from August to November before dying back over summer. New bulb forms at the side of old bulb at flowering. The whole plant has a strong onion aroma.

## Dispersal

Seeds spread by ants, wind and water. Bulbs spread in soil.

## Control

For small plants, hand-pull or fork out ensuring bulb and roots are removed. For large infestations remove the flower heads prior to seed set using a lawn mower or brush cutter. Once the plants show new growth cover with a dense matting (e.g. old carpet or thick newspaper) and cover with mulch. Leave to rot down. It may take several years to exhaust the bulb food supply. Continue to cut new growth and maintain dense mulch.

## Replacement plants

Knobby Club-sedge (Ficinia nodosa)

Wattle Mat-rush (lomandra filiformis)



Agapanthus praecox spp. orientalis **Agapanthus** 

Evergreen plant in leafy clumps to 60cm. Flower heads to 120cm tall. Mauve or white flowers from November to February. Leaves poisonous. Sticky sap can cause severe ulceration in the mouth.

## **Dispersal**

Spreads by seed and underground stems, dumped garden waste and contaminated soil. Available commercially. Many forms and hybrids. Can also be sold at nurseries, markets and fetes.

## Control

Dead-head flowers before they set seed. Remove small clumps by hand digging out all the roots. For larger plants cut leaves off with a brush cutter or lawn mower to stimulate new growth. Then spray new growth with herbicide.

## Replacement plants

Black-anther Flax-lily (Dianella admixta)

Spiny-headed Mat-rush (Lomandra longifolia)





Oxalis pes-caprae

## Soursob

Oxalis purpurea

## **Purple Wood-sorrel**

Underground bulbs produce green clover-like leaves that die back each year in the summer. A healthy plant can have up to 50 bulbs. Soursob produces clusters of bright yellow flowers on one stem from June to December. Purple Wood-sorrel produces pink to purple flowers from April to November.

## Dispersal

Bulbs spread by water, dumped garden waste, birds, contaminated soil and machinery.

### Control

For small plants; dig out removing roots and bulbs. This can be very difficult as the plants have numerous small bulbs. Another option is to continually pick the flowers over years to exhaust the bulbs. For larger infestations; spray with herbicide just prior to flowering.

## **Replacement plants**

Bulbine Lily (Bulbine bulbosa) Ivy-leaf Violet (Viola headeracea)



Romulea rosea var. australis

## **Onion Grass**

This plant produces narrow grass-like leaves from a pea-size underground bulb. Pink star-like flowers from August to November. Fruit is in the form of a cylindrical capsule. A strong onion smell is evident.

## **Dispersal**

Seed and bulbs spread by birds, wind, dumped garden waste and contaminated soil.

## Control

For small plants: dig out taking care to remove the bulb. For larger infestations; spray with herbicide just on flowering.

## Replacement plants

Karkalla (Carpobrotus rossii) Weeping Grass (Microlaena stipoides)



Watsonia meriana var. bulbillifera Wild Watsonia

This erect perennial grows to 2m tall. Five to six sword-shaped leaves grow in winter from each underground bulb that grows close to the soil surface. Tall flower spikes produce 10-15 orange tubular flowers from October to December. Seed capsules rarely produced but small bulb-like cormils form in clusters in the lower part of the flower spike and drop to the ground to germinate. Each underground corm produces 1-3 new corms.

## Dispersal

Corms spread in water, contaminated soil, machinery and in dumped garden waste.

## Control

For small plants; dig out carefully to remove plant and corms. Cutting flower spikes prior to cormil formation will reduce the incidence of spread. For large infestations; spray with herbicide in summer.

## Replacement plants

Chocolate Lily (Arthropodium strictum)

Pale Flax-lily (Dianella longifolia var. longifolia)



Zantedeschia aethiopica
White Arum Lily

This plant is able to form large spreading clumps to 1.5m tall that choke our indigenous plants and impede water flow. Poisonous to people and animals. Large arrow-shaped leaves grow from tubers at the base of the plant. Showy white "flowers" with a protruding yellow spike in the centre of a tall fleshy stem. Fruit forms on flower spike as green berries that turn orange when ripe.

## Dispersal

Seed and root fragments can be spread by water, wind, animals, soil movement, dumped garden waste. Can also be sold at nurseries, markets and fetes.

## Control

As a minimum cut the flower heads before they set seed to prevent seeds spreading. To remove plants dig out to remove all root material. Monitor for regrowth.

## Replacement plants

Black-anther Flax-lily (Dianella admixta)

Spiny-headed Mat-rush (Lomandra longifolia)

## Herbs

Echium plantagineum
Paterson's Curse





Arctotheca calendula

## Cape weed

An annual herb with a fleshy taproot and rosette of leaves to 80cm wide. Leaves deeply lobed, grey-green above and pale-green to white underneath. Produces yellow daisy-like flowers with a black centre on a stalk from September to November. Small seeds are covered with a dense pink-brown wool. A single plant can produce up to 4,000 seeds which can remain dormant for 2 years.

## Dispersal

Seed spread by wind, water, contaminated soil, vehicles and dumped garden waste.

## Control

For small infestations; use a fork to lever out the whole plant including the long taproot. For large infestations; repeated application of herbicide required in late autumn to early spring.

## Replacement plants

Common Flat-pea (Platylobium obtusangulum)

Common Everlasting (Chrysocephalum apiculatum)



Cirsium vulgare
Spear Thistle

A spiny thistle to 1.5m tall with a deep taproot. Flat rosette of hairy leaves with spiny edges in its first year before producing a flower stem and dying after seeding in its second year. Stem leaves are spine-tipped and extend along the length of the stem. Pinkish-purple flowers that are surrounded by green, cottony, spiny bracts. Flowers from spring to autumn. Seeds have a small parachute of long hairs (thistle down).

## Dispersal

Seed spread by wind, water, animals, contaminated soil and dumped garden waste.

## Control

For small infestations; wear protective clothing and use a fork to lever out the whole plant including the long taproot, preferable while the soil is damp. For large infestations; spray herbicide in autumn and spring.

## **Replacement plants**

Spike Wattle (Acacia oxycedrus)

Kangaroo Grass (Themeda triandra)



Echium plantagineum

## **Paterson's Curse**

Erect herb up to 1.2m when mature. Strong taproot with many lateral roots. Initially starts as a rosette from which several branching stems emerge in spring. Leaves and stems are hairy and dark-green. Produces a dense one-sided spike of large purple, tubular flowers from July to January. Seed released from spring to early autumn. Prolific seeder. Each plant produces thousands of seeds that can stay viable in the soil up to 5 years.

## Dispersal

Seeds spread by wind, water, animals, fodder and dumped garden waste.

## Control

For small plants; use a fork to lever out the whole plant including the long taproot, preferable while the soil is damp. For large infestations; spot spray prior to flowering.

## Replacement plants

Chocolate Lily (Arthropodium strictum)

Long Purple-flag (Patersonia occidentalis)



Foeniculum vulgare

## Fennel

A robust herb that grows to 2m tall with slightly zigzagging stems. The leaves are finely divided with thread-like segments. Flowers are small, yellow and carried in branching umbrella-shaped heads from spring to summer. Fennel smells strongly of aniseed. The plants die back to the crown over winter, and produce new growth in spring, sending up new flourishing stems in summer.

## Dispersal

Seed is spread by wind, water, contaminated soil, machinery and dumped garden waste. Root fragments will reshoot.

## Control

For small infestations; mattock out root ball or repeatedly slash stems at ground level prior to flowering to exhaust the plant. For larger infestations; if practical, cut and paint stems in winter-spring. Otherwise, spot spray plants in spring before flowering.

## Replacement plants

Spiny-headed Mat-rush (Lomandra longifolia)

Common Tussock-grass (Poa labillardierei)





## Gazania

Tough, low-growing herb that grows to 30cm. Variable lance-shaped or lobed leaves, dark green upper surface and woolly-white underneath. Short, branched roots that reshoot readily. Flowers are brightly coloured yellow and orange daisy-like to 8cm diameter. Flowers all year round with the peak in spring to autumn.

## Dispersal

Seeds spread by wind and roots will reshoot from dumped garden waste.

## Control

Hand-pull small plants and dig out larger plants ensuring root fragments are removed. Large infestations can be sprayed.

## Replacement plants

Common Flat-pea (Platylobium obtusangulum)

Common Everlasting (Chrysocephalum apiculatum)



Marrubium vulgare **Horehound** 

This bushy perennial herb with up to 200 individual stems usually grows to 30cm tall and 75cm wide. Leaves are rounded about 3cm long with a deeply wrinkled surface and toothed margins. Hairy above, vary hairy to woolly underneath, sharply aromatic when crushed. Small white lobed flowers to 12mm long in dense clusters in the upper sections of the stem, usually from winter to spring. Fruit are brown burrs with small hooked spines. Each burr contains up to 4 small seeds usually from November to January. Mature plants can produce in excess of 200,000 seeds annually.

## Dispersal

Seeds (in burrs) spread by animals, clothing, water and vehicles.

## Control

For small infestation; dig out before flowering. For large infestations; spray with herbicide from March to September.

## Replacement plants

Common Rice-flower (Pimelia humillis)

Austral Stork's-bill (Pelargonium australe)



Onopordum acanthium **Scotch thistle** 

An erect herb to 1m tall with a deep taproot. Rosette of spiny leaves covered with dense, woolly hairs giving it a whitish-grey appearance. Generally one main stem with numerous branches with broad, spiny wings along the stem. The flower heads are purple and round with spiny bracts (modified leaves). The bracts surrounding the flower are sharp, needle-like and bent backwards. Flowers from December to February, however this is subject to rainfall. The seeds have fine, long hairs commonly known as fairies.

## **Dispersal**

Seeds spread by animals (external), clothing and vehicles.

## Control

For small infestations; dig out plants ensuring the taproot is removed. For larger infestations; slash plants prior to flowering to prevent seed set. Spot spray from September to December.

## Replacement plants

Spike Wattle (Acacia oxycedrus)

Kangaroo Grass (Themeda triandra)



Phytolacca octandra
Ink Weed

This is an erect short-lived herb with a large taproot and woody base growing to 2m tall. Stems are green with a reddish tinge, smooth and hairless. Leaves are elliptical to lance-shaped, green turning red. Flowers are small, greenish-white and arranged in dense, long spikes from November to May. Fruit is a berry with reddish-purple juice when ripe and crushed. The colour of the fruit changes from red to purple-black when ripe. Seeds contained within each fruit.

## Dispersal

Seed spread by birds, foxes and dumped garden waste.

## Control

For small plants; dig out ensuring the taproot is removed. For large infestations; cut and paint the stumps.

## Replacement plants

Common Correa (Correa reflexa)

Common Cassinia (Cassinia aculeata)



Plantago lanceolata

## Ribwort

A short-lived annual or biannual herb to 40cm. Long taproot. Flowers mainly from September to April. Rosette of leaves at the base with distinct ribbed stem. Flowers tightly packed on a cylindrical stalk that changes from green to yellow to brown from September to April. Each flower produces 10–20 small black seeds. When ripe each seed pod splits dropping seeds.

## Dispersal

Seed spread by animals, water and dumped garden waste.

## Control

For small plants; dig out ensuring the taproot is removed. For large infestations; spray with herbicide during the active growing season from spring to autumn.

## Replacement plants

Pale Flax-lily (Dianella longifolia var. longifolia) Wattle Mat-rush (Lomandra filiformis)



Portulaca oleracea

## **Purslane**

A prostrate, succulent, running herb that often forms dense mats. Fleshy, red stems. Spoon-shaped shiny leaves to 30mm long. Small, yellow flowers to 6mm form in leaf axils during summer. Fruit egg-shaped capsule with a flattop cap to 5mm long. Cap breaks off when the fruit dries releasing small, shiny black seeds. Thousands of seed produced per plant.

## Dispersal

Seed spread by animals, water, vehicles, contaminated soil and dumped garden waste. Fragments of root and stem will also reshoot.

## Control

For small plants; dig out ensuring the taproot is removed. For large infestations; if practical solarisation or thick mulch can be effective in summer. Otherwise spray with herbicide during the active growing season from spring to autumn.

## Replacement plants

Bidgee-widgee (Acaena novea-zealandiae) Bower Spinach (Tetragonia implexicoma)



Senecio jacobaea

## **Ragwort**

An upright relatively long-lived herb to 1.5m tall. Forms a basal rosette of leaves during the early stages of growth. It later produces one or more upright stems that are multi-branched towards the top of the plant. Leaves are deeply divided and dark-green above and slightly paler and hairy underneath. Bright-yellow daisy-like flowers are borne in dense clusters at the end of branches. Flowering from December to March. The brown seeds have fine white hairs. Large plants can produce 250,000 seeds annually.

## Dispersal

Seeds spread by wind, water, animals, vehicles and dumped garden waste. Root fragments will also reshoot.

## Control

For small plants; dig out ensuring the root system is removed. For larger infestations; slash to ground level prior to flowering. Spray with herbicide in spring.

## Replacement plants

Golden Bush-pea (Pultenea gunnii)

Hop Goodenia (Goodenia ovata)



Solanum nigrum

Black Nightshade

Relatively short-lived plant that grows to 80cm high with purple-green stems which are broadly branching. Leaves are oval-shaped with tips that come to a rounded point and are around 3-8cm long and 2-5cm wide. Flowers are starshaped and white with a purple tinge and a yellow centre. Flowering time spring to summer. Fruits form as a green berry ripening to purple-black.

## Dispersal

Seeds are mainly spread when the berries are eaten by birds.

## Control

Hand-pull small plants including roots. Larger plants can be removed using the cut and paint method.

## **Replacement plants**

Common Rice-flower (Pimelia humillis)

Austral Stork's-bil (Pelargonium australe)



Sonchus oleraceus

## Milk Thistle

An erect hairless branched herb to 1m tall with hollow stems that have a milky sap. A basal rosette of leaves grow to 30cm long. The leaf margins are soft and either lobed or toothed, but not spiny. Tip pointed. The yellow dandelion-like flowers are clustered each about 2cm in diameter. Flowers for much of the year, but mainly in spring and early summer. Seeds are light with white parachutes of silky hairs also known as 'fairies'.

## Dispersal

Seed spread by wind and dumped garden waste.

## Control

For small infestations; dig out ensuring the taproot is removed. For large infestation; spot spray with herbicide.

## Replacement plants

Bidgee-widgee (Acaena novea-zealandiae) Bower Spinach (Tetragonia implexicoma)



Taraxacum spp.

## **Dandelion**

This perennial, stemless herb grows low to the ground forming a rosette of leaves around a centre point. Sharply toothed leaves with the teeth pointing back towards the centre of the plant. A deep taproot. During spring and summer bright-yellow flowers are produced on tall, hollow milky-sapped stalks. The flowers turn into characteristic puff-balls of seeds, also known as 'fairies'. Each puff-ball contains hundreds of small seeds with parachutes of fine hairs to drift on the wind.

## Dispersal

Seed spread by wind and dumped garden waste. Plants will reshoot from the taproot.

## Control

For small infestations; dig out ensuring the taproot is removed. For large infestation; spot spray with herbicide.

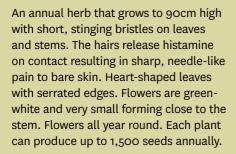
## **Replacement plants**

Bidgee-widgee (Acaena novea-zealandiae)

Bower Spinach (Tetragonia implexicoma)



Urtica urens
Stinging Nettle



## Dispersal

Seeds can spread by wind and contaminated soil.

## Control

Hand-pull wearing gloves and long sleeves or dig out using a hoe or shovel. Nettles are high in nutrients and if removed prior to flowering they can be added to compost or soaked in water for a few days to make a nutrient-rich liquid fertiliser.

## Replacement plants

Common Flat-pea (Platylobium obtusangulum)

Common Everlasting (Chrysocephalum apiculatum)



Vicia spp.

## **Vetch**

A short-lived, scrambling herb with stems to 1m long with alternately arranged leaves borne on short stalks. There is a pair of toothed, leafy structures (stipules) at the base of each leaf stalk. These leaves have 2-7 hairy, toothed leaflets that usually end in one or more tendrils. Purple pea-shaped flowers to 3cm long appear on short stalks in small clusters at the leaf base. Flowering occurs from winter to spring. Seed pods containing 6-12 seeds change from green to brown as the pod matures.

## Dispersal

Seeds are spread by water, contaminated soil, vehicles and dumped garden waste.

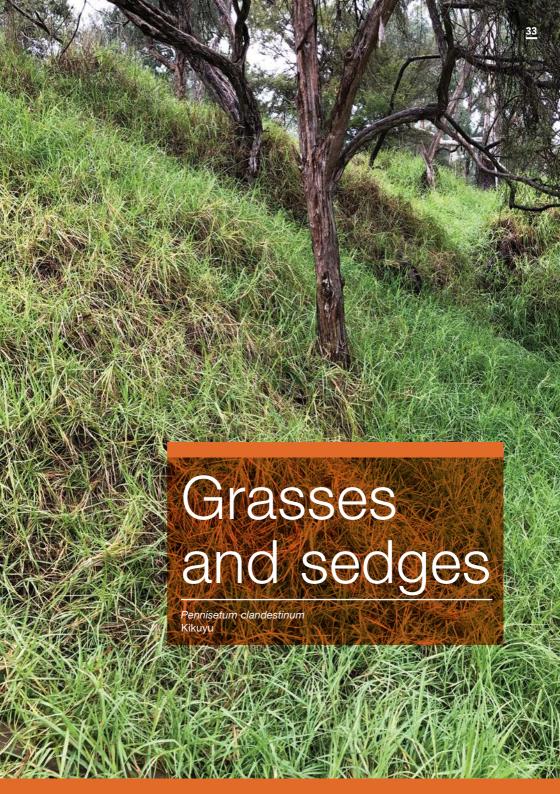
## Control

For small plants; dig out by hand. For large infestations; spray with herbicide.

## **Replacement plants**

Karkalla (Carpobrotus rossii)

Bidgee-widgee (Acaena novea-zealandiae)





Briza maxima

## **Large Quaking Grass**

This annual grass grows to 60cm tall and has distinctive blowfly-like flowering heads. Leaves tend to be sparse. Each plant produces 7-20 spikelets that are drooping, pale green with overlapping layers with small seeds held within. The spikelets dry to brown and rattle in the wind. Flowering from August to December. Abundant seed drop with seeds remaining viable for up to 3 years.

## **Dispersal**

Seed spread by wind, water, animals, dumped garden waste, contaminated soil and machinery such as mowers and brush cutters.

## Control

For small plants; a shallow root system allows easy hand removal prior to flowering. For large infestations; plants can be cut to ground level prior to flowering or spray with herbicide.

## Replacement plants

Common Tussock-grass (Poa labillardierei)

Weeping Grass (Microlaena stipoides)



Cortaderia selloana

## **Common Pampas Grass**

Cortaderia jubat**a** 

## **Pink Pampas Grass**

This is a dense tussocky grass that grows 2-6m tall. Leaves finely serrated and will cut if handled. Feathery flower plumes on stems above the plant from March to May. Each flower head produces 100,000 seeds. Common Pampas Grass flowers white to cream, Pink Pampas Grass flowers are pink.

## Dispersal

Seed and root fragments spread by wind, water, machinery, vehicles, dumped garden waste and contaminated soil.

## Control

Remove flower heads to limit seed spread. For small plants; dig out with a mattock to remove root ball. For large infestations; slash the plants down to ground level and then either dig out or spray with herbicide. Monitor for regrowth.

## Replacement plants

Spiny-headed Mat-rush (Lomandra longifolia

Prickly Spear-grass (Austrostipa stipoides)



Cyperus eragrositis

#### **Drain Flat-sedge**

This tufted perennial grows to 20-100cm high. Long thin pointed leaves radiate from the top of triangular stems similar to an umbrella. The flowers are found within tough greenish-yellow spikelets. Flowering time December to July. Pale brown egg-shaped or angled seeds drop when ripe. A common weed of wet, open disturbed sites including drains and roadside.

#### Dispersal

Small seeds are mainly spread by water, but may also be spread by animals and machinery.

#### Control

For small plants; remove flowers before they produce seed. Dig out taking care to remove root system. For larger infestations; as Drain Flat-sedge tends to grow in wet areas an aquatic herbicide is required.

#### Replacement plants

Knobby Club-sedge (Ficinia nodosa)

Prickly Spear-grass (Austrostipa stipoides)



Ehrharta erecta

#### Panic Veldt-grass (left) Ehrharta longiflora

Annual Veldt-grass (right)

Annual Veldt-grass has distinctive purple colouring on the base of leaves, nodes and flowers. Flowers mainly from August to December. Panic Veldt-grass is also known as budgie grass as it is commonly harvested by pet owners to feed caged birds. Flowers all year but mostly September to March.

#### Dispersal

Seed spread by animals, wind, machinery, contaminated soil and dumped garden waste.

#### Control

For small infestations; an easy plant to hand-pull as the root system is shallow. Mulch the area after removal and monitor for new growth. For large infestations; mow before flowering (if practical) and solarise. Otherwise spraying herbicide is an option. Ongoing monitoring and follow-up is required.

#### Replacement plants

Common Wallaby-grass (Rytidosperma caespitosum)

Kangaroo Grass (Themeda triandra)



Holcus lanatus
Yorkshire Fog

# This grass has velvety blade leaves that are greyish with reddish stripes on the stem sheath. Grows up to 1m tall and later flops over. Flower heads initially dense but opening out as the seed matures. Outer segments pinkish when young, becoming silky white, sometimes with pink or purple flushes. Flowers from spring to summer.

#### Dispersal

Seed spread by animals, wind, machinery, contaminated soil and dumped garden waste. One of the most common contaminants of straw and pots from nurseries.

#### Control

For small infestations; Hand-pull. For large infestations; mow and solarise if practical. Otherwise herbicide spraying may be necessary.

#### Replacement plants

Common Wallaby-grass (Rytidosperma caespitosum)

Kangaroo Grass (Themeda triandra)



Paspalum dilatatum

#### **Paspalum**

A summer-growing perennial grass. Grows to 1m with creeping underground stems. The leaves consist of a leaf sheath, which partially encloses the stem and a spreading leaf blade. Four to seven long drooping flower spikes each 4-7cm long that are purple-green. Flowers from December to July. Seeds are in rows along the flowering spike, brown and sticky when ripe.

#### Dispersal

The seeds adhere to most surfaces and are easily spread via animals, machinery, clothing, wind, and water. Root and stem fragments will reshoot.

#### Control

For small plants; dig out with a mattock taking care to remove all the underground stems and roots. For larger infestations; spray with herbicide during the active growth period of late spring to early autumn. Monitor for regrowth.

#### Replacement plants

Knobby Club-sedge (Ficinia nodosa)

Prickly Spear-grass (Austrostipa stipoides)



Pennisetum clandestinum

#### Kikuyu

Cynodon dactylon

#### Couch

Perennial lawn grasses that can become invasive. Kikuyu flowers are concealed inside the leaf sheaths. Flowers from January to April. Couch produces flower heads like the spokes of an umbrella. Flowering from summer to autumn.

#### Dispersal

Root and stem fragments spread by mowing equipment, in soil and dumped garden waste. Seed spread by animals, wind and water.

#### Control

For small plants; dig out taking care to remove root fragments. For large infestations; if practical cut grass low and cover with plastic sheeting or thick newspaper. Mulch over and monitor for regrowth. Otherwise spray with herbicide.

#### **Replacement plants**

Common Tussock-grass (Poa labillardierei)

Weeping Grass (Microlaena stipoides)



Phalaris spp.

#### **Canary Grass**

This perennial grass grows to 160cm tall with smooth hairless leaves to 30cm long. The flower heads are dense, cylindrical spike-like from 5-15mm long. Flowers from November to January. Smooth, light brown seeds dropped autumn through winter. Phalaris can be slow to establish but once it has an extensive root system, it can rapidly spread.

#### Dispersal

Seeds spread by water, animals or machinery. Dumped garden waste. Root fragments will reshoot.

#### Control

For small plants; dig out prior to flowering taking care to remove root fragments. For larger infestations; brush cutting or mowing prior to flowering or spray with herbicide during the active growing time winter to spring.

#### Replacement plants

Common Wallaby-grass (Rytidosperma caespitosum)

Kangaroo Grass (Themeda triandra)

# Small to medium shrubs

*Ulex europaeus* Gorze





Acacia longifolia subsp. longifolia
Sallow Wattle

This large, bushy, evergreen shrub is fast-growing but short-lived. Bright green leaves (phyllodes) to 20cm long. Flowers are dense, cylindrical yellow spikes in late winter and spring. Cylindrical seed pods to 10cm long contain 6-10 seeds per pod. Shallow wattle is often confused with the local Coastal Wattle (*Acacia longifolia* spp. *sophorae*) which can also be considered a weed outside coastal areas. The difference in these two species can be seen in the phyllodes. Sallow Wattle typically has longer, narrower phyllodes than Coast Wattle.

#### Dispersal

Seeds spread by animals, water, soil contamination and dumped garden waste.

#### Control

For small plants; hand-pull. For large plants; cut and paint.

#### Replacement plants

Blackwood (Acacia melanoxylon)

Prickly Moses (Acacia verticillata)



Chrysanthemoides monilifera ssp. monilifera

#### **Boneseed**

Bushy, upright shrub to 3m high. Dull-green leaves with toothed edges. Seedlings and young leaves light green with soft cobweb-like down. Yellow flowers from July with peak flowering from September to October. Fleshy green fruit becoming black as the berry matures. Seeds pea-sized, hard and white when dry. Can produce up to 50,000 seeds per plant per year.

#### Dispersal

Seeds spread by birds, foxes and other animals, water, dumped garden waste and contaminated soil and machinery.

#### Control

For small plants; Boneseed has a shallow root system so hand-pulling is an option for plants up to 1m. For larger plants; cut stems and paint. Monitor for seedling germination that will occur when mature plants are removed.

#### **Replacement plants**

Golden Bush-pea (Pultenaea gunnii)

Prickly Moses (Acacia verticillata)



Coprosma repens
Mirror Bush

# Dense evergreen shrub that grows to 8m. Dark green, oval-shaped leaves, glossy upper surface and dull lower surface. Flowers in clusters, small, green to white tubular from September to December. Fleshy berries ripen from green to orange from late summer to autumn. Seeds germinate readily in a range of conditions.

#### Dispersal

Seeds spread by birds and animals (internal), contaminated soil and dumped garden waste. Lower branches touching the ground will root to form new plants.

#### Control

For small plants; hand-pull. For larger plants; cut and paint. They are likely to re-sprout and will require follow up spraying.

#### Replacement plants

Common Boobialla (Myoporum insulare)

Large Kangaroo Apple (Solanum laciniatum)



Charmaecytisus palmensis

Tree Lucerne (or Tagasaste)

A small, spreading, evergreen tree that grows to 3-4m tall. Roots can extend to a depth of 10m or more. The rough is rough yellow-grey. Leaves elliptical to 5cm and grey-green in colour, slightly paler on the underside. Young growth is velvety. Scented, creamy-white pea-like flowers appear in late winter and spring. Seed pods are flat, pea-like and green, ripening to shiny black. In warm weather the seed pods explosively release the seeds.

#### **Dispersal**

Animals (especially ants), contaminated soil and dumped garden waste.

#### Control

For small plants; seedlings can easily be hand-pulled taking care to remove the root system. For larger plants; cut and paint or drill and fill.

#### Replacement plants

Silky Tea-tree (Leptospermum myrsinoides)

Grey Saltbush (Atriplex cinerea)



Cytisus scoparius / Genista linifolia / Genista monspessulana

#### **Brooms**

Large shrubs that grows to 3-4m. Leaves vary from sparse almost leafless (C. scoparius) to oval-shaped, dark on the green upper surface and slightly hairy underneath (G.monspessulana) and with G.linifolia 3cm long leaves with rolled edges, grey-green above and silky white underneath. Bright yellow pea flowers from August to November (Genistas) and October to December (Cytisus). Seed pods explosively release seeds on hot days.

#### Dispersal

Seeds spread by animals, water, vehicles, contaminated soil, machinery and dumped garden waste. Often sold at markets and fetes.

#### Control

or small plants; hand-pull seedlings. For larger plants; spray herbicide on the leaves or cut and paint the stems.

#### Replacement plants

Hop Bitter-pea (Daviesia latifolia)

Golden Tip (Goodia lotifolia)



Erica lusitanica

Spanish Heath

An evergreen upright, slender shrub to 2m tall. Leaves crowded, in rings of 3-4 narrow to with margins rolled under. White to pink flowers in clusters on the end of branches from June to September. Fruit capsules contain hundreds of tiny dust-like seeds that can remain viable for 4 years and are released from October to January. Plants live for about 30 years with an estimate of 9 million seeds released per plant annually.

#### Dispersal

Seeds spread by wind, water, animals, machinery, contaminated soil and dumped garden waste. Roots readily sucker.

#### Control

For small plants; hand-pull before spring taking care to remove root system that will reshot. For larger infestations; brush cut in early autumn and spray.

#### Replacement plants

Common Beard Heath (Leucopogan virgatus)

Common Heath (Epacris impressa)



Lycium ferocissimum African Box-thorn

A thorny shrub to 5m. Leaves in clusters along branches and at the bases of spines. Spines to 3cm long on branches. Purplish-white fragrant flowers from spring to summer but can occur throughout the year. Orange round berries contain yellow seed.

#### Dispersal

Seeds spread by animals, contaminated soil and vehicles and dumped garden waste. Root fragments will sucker.

#### Control

For small plants; hand-pull taking care to remove as much root system as possible. For larger infestations; depending on your situation either use a tractor with a blade to mechanically remove plants when the soil is damp and spray regrowth. Otherwise spray the foliage or cut and paint if you can avoid the plant spines. Burn the removed material.

#### Replacement plants

Sea Box (Alyxia buxifolia) Prickly Tea-tree (Leptospermum continentale)



Polygala myrtifolia

Myrtle-leaf Milkwort

An erect to spreading shrub to 3-4m tall. Oval-shaped leaves to 40mm. Mauve pea-shaped flowers with a white blotch most of the year, but mainly August to December. Fruit is a flattened capsule with marginal wing, ripening from green to papery brown. Seeds dark brown to 5mm long and long-lived. Prolific seeder.

#### Dispersal

Seed is spread by water, birds, ants, contaminated soil, machinery and dumped garden waste. Often sold at markets and fetes.

#### Control

For small plants: hand-pull. For larger plants: cut and paint.

#### Replacement plants

Large Kangaroo Apple (Solanum laciniatum)

Austral Indigo (Indigofera australis)



Rosa rubiginosa

#### **Sweet Briar**

A large, deciduous, multi-stemmed shrub to 3m with prickly stems and leaves. Round to oval leaves to 30mm with toothed margins. Fragrant open five-petal pink flowers from November to January. Oval fruit about 2cm long maturing to red-orange over summer to shed in autumn. Each fruit contains numerous small seeds.

#### Dispersal

Seeds are spread by water, animals, machinery, contaminated soil and dumped garden waste. Roots and stems will sucker.

#### Control

For small plants: hand-pull wearing protective clothing and try to remove roots. For larger plants; spray foliage during the active growing season best before fruit set. Monitor for regrowth.

#### Replacement plants

Prickly Tea-tree (Leptospermum continentale) Spike Wattle (Acacia oxycedrus)



Rubus fruticosus spp. aggregate **Blackberry** 

A prickly, scrambling shrub. Leaves oval, dark-green above and lighter underneath. Leaves are often shed in winter. Stems are canes to 7m long with numerous prickles. Flowers white to pink from October to February. Green berries gradually turn red then black on ripening from late December to April. Each berry segment contains a seed.

#### Dispersal

Seeds spread by animals, humans, water, contaminated soil and dumped garden waste. Canes touching the ground will root and form a new plant. Root fragments will reshoot.

#### Control

Managing blackberry usually requires a number of strategies. Initially slash infestations to reduce biomass and then spray foliage with herbicide from November to March. Monitor for regrowth.

#### Replacement plants

Small-leaf Bramble (Rubus parvifolius)

Prickly Moses (Acacia verticillata)



Solanum mauritianum Tobacco Nightshade

A large herbaceous shrub to 4m tall at maturity. Densely covered with velvety hairs on branches, flower parts and under surface of leaves. Oval leaves with sharply pointed tips, often drooping. Upper surface green and sparsely hairy, lower surface grey and densely hairy. Violet flowers in flat-topped clusters to about 15cm at the tips of branches from March to November. Small, round berries turn from green to yellow as it ripens. Yellowish seeds to 2mm long. All parts of the plant are likely to be poisonous, but particularly the leaves and unripe berries.

#### Dispersal

Seeds spread by birds, animals and dumped garden waste.

#### Control

For small plants; hand-pull. For large plants; cut and paint or drill and fill.

#### Replacement plants

Large Kangaroo Apple (Solanum laciniatum)

Sweet Bursaria (Bursaria spinosa)



Ulex europaeus

#### Gorze

A spiny shrub to 4m tall. Stems are green when young turning brown and woody when mature. Covered in spines. Leaves are green and only present on young plants. Adult stage, leaves are shed and replaced with spines to 3cm long. Yellow flowers from July to October and from March to May. Brown seed pod explodes to release up to 6 shiny, hard black seeds. Plants and seeds can live up to 30 years.

#### Dispersal

Seed spread by water, animals, vehicles, contaminated soil and machinery and dumped garden waste.

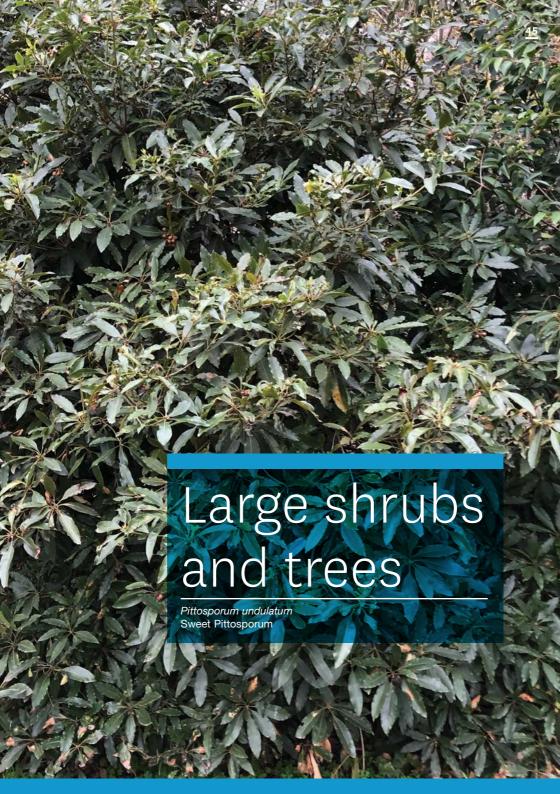
#### Control

The spiny nature of this plant makes it difficult to access. For small infestations; hand-pull wearing protective clothing or slash and spray. For large infestations; slash if possible and spray herbicide. Monitor for regrowth.

#### Replacement plants

Golden Bush-pea (Pultenaea gunnii)

Hop Goodenia (Goodenia ovata)





Acacia baileyana

## Cootamundra Wattle

A small, evergreen tree or large shrub to 10m tall. Fern-like silver-blue to grey leaves. Yellow, fluffy flowers from June to September. Brown to black seeds contained in straight to slightly curved pods that are initially blue-grey becoming brown with age. Seeds can survive in the soil for many years due to the hard seed coat. A fast-growing plant but generally short lived.

#### Dispersal

Seeds spread by ants, birds, wind, water, contaminated soil and dumped garden waste. Widely available in nurseries, fetes and markets.

#### Control

For small plants; easily hand-pulled. For large plants; cut and paint with herbicide or drill and fill the truck of the tree.

#### Replacement plants

Sweet Wattle (Acacia suaveolens)

Spike Wattle (Acacia oxycedrus)



Cotoneaster spp.

#### Cotoneaster

Upright plant with arching branches and young stems have dense woolly hairs. Small oval leaves to 40mm long and 15mm wide. Dull green and hairless above, silvery below with dense hairs. Small white flowers in clusters of 6-20 from October to January. Clusters of round green fruit that gradually turns red when ripe from February to August. Each fruit contains two seeds. Seeds are long-lived in the soil and will germinate when disturbed.

#### Dispersal

Fruit often referred to as 'Bird lollies' as birds feast on the ripe fruit. Foxes also eat the fruit. Dumped garden waste another form of dispersal.

#### Control

For small plants; hand-pull if all the roots can be removed. For large plants; cut and paint with herbicide or drill and fill the truck of the tree.

#### Replacement plants

Sweet Bursaria (Bursaria spinosa)

Snowy Daisy-bush (Olearia lirata)



Crataegus monogyna **Hawthorn** 

A deciduous, thorny large shrub or tree to 10m tall. Leaves lobed and irregular varying from roughly oval to triangular with toothed edges. Flowers white, cream or pink in flat-topped clusters at the end of small branches from October to December. Clusters of fleshy deep red berries on long stalks in clusters mostly in summer. Each fruit contains a hard, brown seed that possibly survives for up to 70 years in the soil.

#### Dispersal

Seed spread by birds, animals, contaminated soil, machinery, vehicles and dumped garden waste. The plant will also sucker when cut.

#### Control

For small plants; hand remove taking care to remove all roots as they will reshoot. For larger plants; cut and paint with herbicide or drill and fill the truck of the tree.

#### Replacement plants

Sweet Bursaria (Bursaria spinosa)

Scented Paperbark (Melaleuca squarrosa)



Fraxinus angustifolia ssp. angustifolia **Desert Ash** 

A deciduous tree with a dense rounded crown to 20m or more. The leaves are opposite and around 14-20cm long. Flowers are inconspicuous green or purple in colour and appear in spring. The seeds form in large, drooping clusters and are flat, winged at the top and slightly twisted.

#### Dispersal

The winged seeds are design to travel by wind and water. The roots will also sucker. Spread in dumped garden waste, chipped mulch from desert ash street tree prunings. Available in nurseries.

#### Control

For small plants; hand remove taking care to remove all roots as they will reshoot. For larger plants; cut and paint with herbicide or drill and fill the truck of the tree.

#### Replacement plants

Common Boobialla (Myoporum insulare)

Lightwood (Acacia implexa)



Hakea salicifolia
Willow-leaf Hakea

A fast-growing erect shrub or small tree to 5-6m. Smooth, green, spear-shaped leaves. New growth is red-tinged at the leaf tips. Creamy-white flowers between the leaves and branch stems between August and November. Followed by woody seed capsules with a slightly upturned beak covered in small bumps. The capsule splits in two to release a winged seed. When the plant dies it releases huge quantities of viable seed.

#### Dispersal

Winged seeds are spread by wind and in dumped garden waste. Germinates profusely after fire. Can be promoted in nurseries as a drought-tolerant native.

#### Control

For small plants; hand-pull. For larger plants; cut and paint or drill and fill.

#### Replacement plants

Spike Wattle (Acacia oxycedrus)
Snowy Daisy-bush

(Olearia lirata)

Paraserianthes lophantha subsp. lophantha

#### Cape Wattle

An evergreen small tree with spreading lacy crown to 8m. Feathery leaves are finely divided and fold up as evening approaches. Bottlebrush-like greenish-yellow flowers to 10cm long from May to August. Hard-coated black seeds contained in yellow-green pods that turn reddish-brown when mature. Prolific seeder. When a mature tree is removed, a carpet of seedlings erupts underneath.

#### Dispersal

Seeds spread by water, wind, birds, ants, dumped garden waste and contaminated soil. Available in nurseries and markets.

#### Control

For small plants; hand-pull. For large trees; cut the trunk to ground level and paint with herbicide. Monitor for seedling growth following removal.

#### Replacement plants

Blackwood (Acacia melonoxylon)

Lightwood (Acacia implexa)



Pinus radiata

Monterey Pine

Tall evergreen tree growing to 30m.
Usually spreading with straight branches and dark deeply fissured bark on the trunk. Dark-green, needle-like leaves.
Male cones small and scaly and clustered near the branch tips. Female cones large, woody and egg-shaped. Dry winged seeds released from mature cones.

#### Dispersal

Seeds spread by wind, water and animals. Cockatoos in particular love feeding on the seeds. Dumped garden waste. Widely available in nurseries.

#### Control

For smaller plants; pull out seedlings and cut saplings off at ground level (no herbicide required). For large trees; drill and fill.

#### Replacement plants

Black Sheoak (Allocasuarina littorallis)

Drooping Sheoak (Allocasuarina verticillata)



Pittosporum undulatum
Sweet Pittosporum

Evergreen small tree to 10m with dense foliage. Glossy dark-green leaves, aromatic when crushed. Fragrant creamy-white or pale yellow bell-shaped flowers in clusters from August to December. Clusters of orange grape-sized berries ripening in autumn to winter. Capsules split open when ripe and contain 20-30 sticky reddish seeds.

#### Dispersal

Sticky seeds spread on the fur and feathers of animals and people as well as being ingested. Also spread in dumped garden waste and contaminated soil and machinery. Roots and trunk will sucker if cut.

#### Control

For small plants; only hand remove very small plants and ensure you remove all the roots. For large trees; cut and paint with herbicide or drill and fill the truck of the tree.

#### Replacement plants

Blackwood (Acacia melonoxylon)

Mealy Stringybark (Eucalyptus cephalocarpa)



Prunus cerasifera

#### **Cherry Plum**

A hardy, deciduous green or purple-leafed tree (*P.cerasifera* 'nigra') that grows to 12m. Common along roadsides and waterways. Leaves are oval-shaped with a pointy tip and serrated margins. Smooth green or purple upper surface and paler underside with downy growth on veins. White or pale-pink flowers on short stalks in clusters or solitary from August to September. Smooth yellow to red stone fruit which resembles a cherry and is edible.

#### **Dispersal**

Seeds spread by water, animals that eat the fruit, dumped garden waste and contaminated soil.

#### Control

Hand-pull small plants. For larger plants cut and paint or drill and fill in summer before fruit sets.

#### Replacement plants

Blackwood (Acacia melonoxylon)

Lightwood (Acacia implexa)



Salix spp.

#### Willows

Willows vary from about 5-30m in height and may have single or multiple trunks. Arching, weeping branches with long, deciduous leaves that drop in winter. Catkin flowers fragrant, cream to yellow and 10cm long in August to November. Seeds are short-lived (a few days) and fall in November. Mainly reproduce from stem, root and twig fragments that can root and grow rapidly. Willows typically invade waterways and wetland.

#### Dispersal

Spread mainly by water (downstream), wind and dumped garden waste.

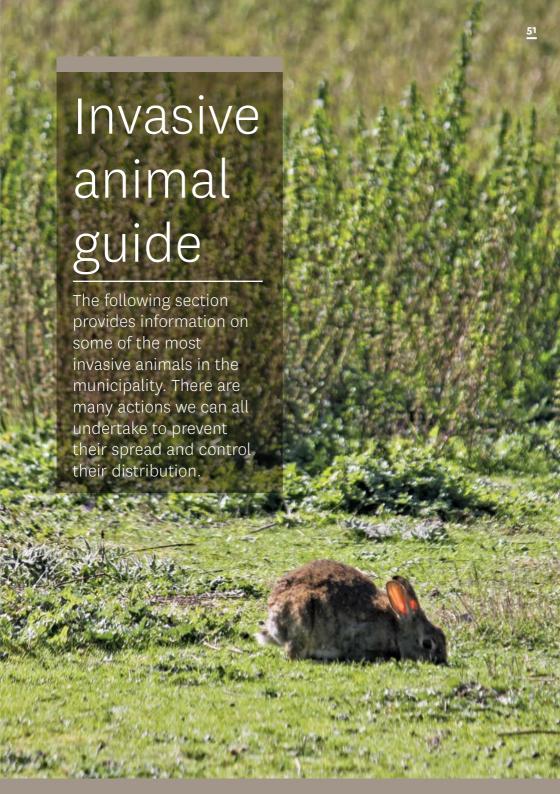
#### Control

For small plants less than 500mm; hand pull, leaving small roots in the ground does not lead to regrowth. For larger plants; excavators can be used to remove plants but roots will reshoot if not removed. Otherwise cut and paint or drill and fill anytime through the year.

#### Replacement plants

Black Sheoak (Allocasuarina littorallis)

Drooping Sheoak (Allocasuarina verticillata)





Acridotheres tristis
Indian Myna

Indian Mynas adapt easily to urban landscapes. They reduce biodiversity through predation and aggressive competition with native wildlife, particularly hollow-nesting birds and mammals. They are long-lived and have two breeding seasons per year. They are territorial but roost communally.

#### **Prevention**

Indian Mynas thrive where there is easy access to food. Feed pets indoors. Don't put out birdfeeders. Ensure they cannot access exposed rubbish bins. They also like to roost in roof cavities and palm trees. Block any entry holes to your roof and keep palms trimmed back.

#### Control

Trapping and euthanizing Indian Mynas is legal but must be undertaken humanly. It is important not to confuse them with the native Noisy Miner (Manorina melanocephala)

For further information visit frankston. vic.gov.au/Environment\_and\_ Waste/Environment/Biodiversity/ Pest\_Animals



Asterias amurensis
Northern Pacific Seastar

#### The problem

This invasive seastar is a voracious predator that feeds on a wide range of native marine species including pippies, mussels, other molluscs and crabs. It has few known predators, reproduces quickly and rapidly spreads to new areas.

The Northern Pacific Seastar is often located in sand areas around jetties and piers although it lives in all areas of Port Phillip Bay. It can be distinguished from native species by its pointy arm tips that curl upwards and spines on the body. Juveniles have purple arm tips. The Northern Pacific Seastar was first reported in Port Phillip Bay in 1995 and now numbers in the millions.

#### **Prevention**

Thoroughly wash down boats and fishing equipment after use.

#### Control

If you find a Northern Pacific Seastar do not return it to the water. They can regrow from severed arms. Don't cut them up. Bag and bin them.



Carcinus maenas

Green Shore Crab

An aggressive predator with a shell up to 7cm wide with strong pincers and a broad diet. It out-competes native crabs for food and habitat. The Green Shore Crab is major cause of mortality of native crab and mollusc populations. It was first recorded in Port Phillip Bay in 1900, introduced accidently as a hitch-hiker on ships from Europe. They have since spread throughout coastal Victoria, South Australia and northern Tasmania. They are usually found in the intertidal zone and amongst seagrass. Also referred to as the European Green Shore Crab or the European Crab.

#### **Prevention**

Thoroughly wash down boats and fishing equipment after use. Do not use as live bait.

#### Control

If you find a Green Shore Crab do not return it to the water.



Felis catus
Feral cat

#### The problem

Domestic cats in the wild are ferocious predators. They are highly adaptable with few natural predators. Not only are they responsible for the extinction of many native animals, but they can spread parasites and diseases such as toxoplasmosis that can affect humans and other animals.

#### **Prevention**

Ensure your pet cat has been desexed. Secure your cat, especially at night, so they don't prey on native animals. Either keep them indoors or in a pet enclosure. Work with your neighbours to encourage them to also secure their cats. Collar bells on cats have limited success. Never dump unwanted pets in natural areas as it is not only cruel, but illegal.

#### Control

If you see a feral cat in one of Frankston's Natural Reserves please contact our Bushland Management team on info@frankston.vic.gov.au



Gambusia holbrooki Mosquitofish

An aggressive introduced fish that fin-nips fish much larger than itself and feeds on the eggs and larvae of native fish and frogs. Mosquitofish have contributed to the decline of 9 native fish species and 10 species of frogs in Australia. They tolerate a wide range of water conditions and frequent farm dams, slow-moving waterways and shallow wetlands.

#### **Prevention**

Do not use Mosquitofish as live bait. They can inadvertently be transported in fishing gear and boats. Ensure equipment is well-cleaned and air dried before next use. Never dump aquarium fish in waterways.

#### Control

Unfortunately control of Mosquitofish is very difficult as viral, bacterial or parasitic controls and poisons will also harm native fish.



Mus musculus
House Mouse

#### The problem

The house mouse is considered one of the most troublesome and economically destructive pests in Australia. House mice live and thrive under a variety of conditions in and around homes and farms. House mice consume food meant for humans or pets. They contaminate food-preparation surfaces with their faeces, which can contain the bacterium that causes food poisoning. Their constant gnawing causes damage to structures and property.

#### **Prevention**

Try and eliminate openings where mice can enter or access food and shelter. Store food in glass jars or metal containers. Seal gaps and holes with steel wool and seal gaps around water pipes, vents and utilities with concrete.

#### Control

Traps are the most common method of controlling mice. Humane traps are available.



Oryctolagus cuniculus
European Rabbit

Rabbits cause considerable damage to the natural environment and agricultural production. Overgrazing leads to a significant loss of indigenous plants and crops. Building warrens causes erosion and land degradation. Rabbits are also very effective at spreading invasive plants. They are considered Australia's most serious pest and landholders have a responsibility to control them.

#### **Prevention**

Monitoring is important. Take a walk with around your property with a strong torch at dusk or the early morning. Record how many rabbits you see, what they are feeding on and where they run when disturbed. Try and identify rabbit harbours. It may be a burrow,

a thicket of woody weeds, under a shed, or in a wood pile. Remove weeds such as Boxthorn, Blackberry or Gorze that provide harbour and replace with indigenous species. Install wire netting around the base of buildings and build rabbit-proof fences around vegetable gardens or woodpiles. Warrens can be destroyed with a mattock, shovel or pick.

#### Control

Rabbit control requires persistence and implementing a number of different control methods. Work with your neighbours for a unified approach that will have the biggest impact. Options for control include baiting, fumigation and ferreting. For detailed information visit: rabbitaction.com or

pestsmart.org.au

#### Feralscan

Help researchers by mapping feral animal sightings in your local area. Visit **feralscan.org.au** 



Rattus rattus Black Rat

Rats are agile climbers that devour large amounts of food, gnaw through electrical cables, wooden structures and plastic food containers. They spread disease and have pungent urine.

#### **Prevention**

Try to seal rat entry points, particularly in roof areas with steel wool, concrete or metal flashings. Rat-proof food and waste containers by using metal or glass containers and do not leave pet food out. Prune tree branches overhanging the house that may allow easy access. Enclose garden produce to keep rats out.

#### Control

Traps and bait are the most common methods of controlling rats. Humane traps are available.



Vulpes vulpes **European Red Fox** 

#### The problem

Foxes are opportunistic predators and scavengers and have few natural predators in Australia. Red foxes pose a threat to native wildlife.

#### **Prevention**

Foxes shelter in Blackberry thickets and other woody weeds. Removing weeds, piles of building materials or securing sheds can reduce fox harbours. Foxes are mainly scavengers that eat a wide variety of food. Do not leave pet food out overnight, collect fallen fruit from under fruit trees, seal compost bins and secure chickens and pets in safe enclosures.

#### Control

A combination of fumigation of fox dens, baits laid by a licensed contractor, shooting or trapping can be useful methods of control. For detailed information visit:

**agriculture.vic.gov.au** and search 'integrated fox control for urban and semi-urban areas'.

Group	Common name	Botanical name	Page
nbers	Asparagus Fern	Asparagus scandens	15
	Blue Periwinkle	Vinca major	19
	Bluebell Creeper	Billardiera heterophylla	15
	Bridal Creeper	Asparagus asparagoides	14
	Cape Ivy	Delairea odorata	16
Creepers and climbers	Climbing Groundsel	Senecio angulatus	18
ers an	Dolichos Pea	Dipogon lignosus	16
Creep	English Ivy	Hedera helix	17
	Japanese Honeysuckle	Lonicera japonica	18
	Morning Glory	Ipomoea indica	17
	Rambling Dock	Acetosa sagitatta	14
	Wandering Tradescantia	Tradescantia fluminensis	19
Lilies and bulbs	Agapanthus	Agapanthus praecox ssp. orientalis	21
	Angled Onion	Allium triquetrum	21
	Onion Grass	Romulea rosea var. australis	22
	Purple Wood-sorrel	Oxalis purpurae	22
	Soursob	Oxalis pes-caprae	22
	White Arum Lily	Zantedeschia aethiopica	23
	Wild Watsonia	Watsonia meriana cv. 'Bulbillifera'	23

Group	Common name	Botanical name	Page
	Black Nightshade	Solanum nigrum	30
	Cape weed	Arctotheca calendula	25
	Dandelion	Taraxacum spp.	31
	Fennel	Foeniculum vulgare	26
	Gazania	Gazania spp.	27
	Horehound	Marrubium vulgare	27
	Ink Weed	Phytolacca octandra	28
rbs	Milk Thistle	Sonchus oleraceus	31
Hei	Paterson's Curse	Echium plantagineum	26
	Purslane	Portulaca oleracea	29
	Ragwort	Senecio jacobaea	30
	Ribwort	Plantago lanceolata	29
	Scotch Thistle	Onopordum acanthium	28
	Spear Thistle	Cirsium vulgare	25
	Stinging Nettle	Urtica urens	32
	Vetch	Vicia spp.	32
Grasses and sedges	Annual Veldt-grass	Ehrharta longiflora	35
	Canary Grass	Phalaris spp.	37
	Common Pampas Grass	Cortaderia selloana	34

Group	Common name	Botanical name	Page
Grasses and sedges	Couch	Cynodon dactylon	37
	Drain Sedge	Cyperus spp.	35
	Kikuyu	Pennisetum clandestinum	37
	Large Quaking Grass	Briza maxima	34
	Panic Veldt-grass	Ehrharta erecta	35
	Paspalum	Paspalum dilatatum	36
	Pink Pampas Grass	Cortaderia jubata	34
	Yorkshire Fog	Holcus lanatus	36
	African Boxthorn	Lycium ferocissimum	42
	Blackberry	Rubus fruitcosus spp. aggregate	43
	Boneseed	Chrysanthemoides monilifera ssp. monilifera	40
sqn	English Broom	Cytisus scoparius	41
m shr	Flax-leaf Broom	Genista linifolia	41
nediu	Gorse	Ulex europaeus	44
Small to medium shrubs	Mirror Bush	Coprosma repens	41
	Montpellier Broom	Genista monspessulana	41
	Myrtle-leaf Milkwort	Polygala myrtifolia	42
	Sallow Wattle	Acacia longifolia subsp. longifolia	39
	Spanish Heath	Erica lusitanica	41

Common name invasive plant mask				
Group	Common name	Botanical name	Page	
Small to medium shrubs	Sweet Briar	Rosa rubiginosa	43	
	Tobacco Nightshade	Solanum mauritianum	44	
	Tree Lucerne	Charmaesytisus palmensis	40	
Large shrubs and trees	Cape Wattle	Paraserianthes lophantha subsp. lophantha	48	
	Cherry Plum	Prunus cerasifera	50	
	Cootamundra Wattle	Acacia baileyana	46	
	Cotoneaster	Cotoneaster spp.	46	
	Desert Ash	Fraxinus angustifolia ssp. angustifolia	47	
	Hawthorn	Crataegus monogyna	47	
	Monterey Pine	Pinus radiata	49	
	Sweet Pittosporum	Pittosporum undulatum	49	
	Willow-leaf Hakea	Hakea salicifolia	48	
	Willows	Salix spp.	50	



### **Further reading**

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Frankston City Council Indigenous Plant Guide, (Frankston City Council publication).

Natural Reserves within the Frankston City, (Frankston City Council publication).

Sustainable Gardening in Frankston City, (Frankston City Council publication).

#### **Useful** websites

Frankston City Council frankston.vic.gov.au

Agriculture Victoria agriculture.vic.gov.au

Department of Environment, Land, Water & Planning delwp.vic.gov.au

Port Phillip and Western Port
Catchment Management Authority
ppwcma.vic.gov.au







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